Defense Information Systems Agency

A Combat Support Agency

Continuous Delivery
Maximizing Velocity and Value

SoftwareForge Document ID – doc16435

Forge.mil Engineering
August 2011

Stop thinking BIG!

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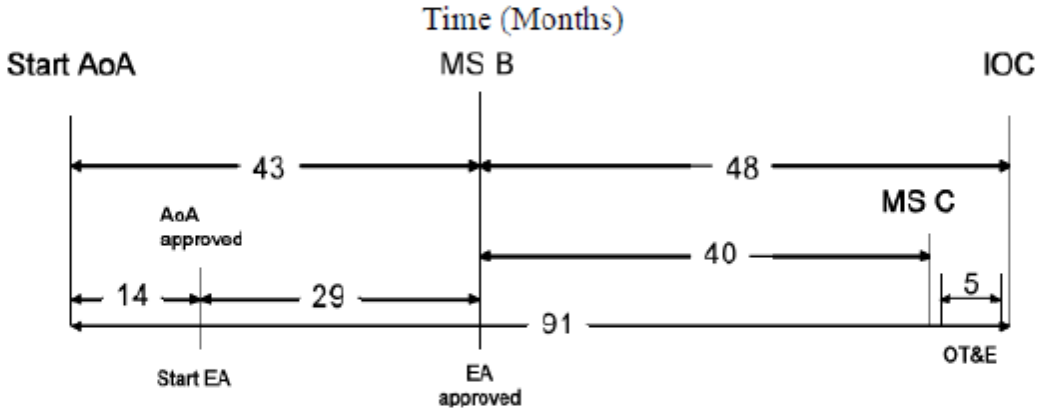
The Problem



Defense Science Board: DoD Policies and Procedures for the Acquisition of Information Technology, March 2009

"An analysis of 32 major automated information system acquisitions… the average time to deliver an initial program capability is 91 months…"

DISTRIBUTION STATEMENT A – Cleared for public release by OSR on 27 Apr 2010 – SR case number 10-S-1802

UNCLASSIFIED

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Delivery Challenge

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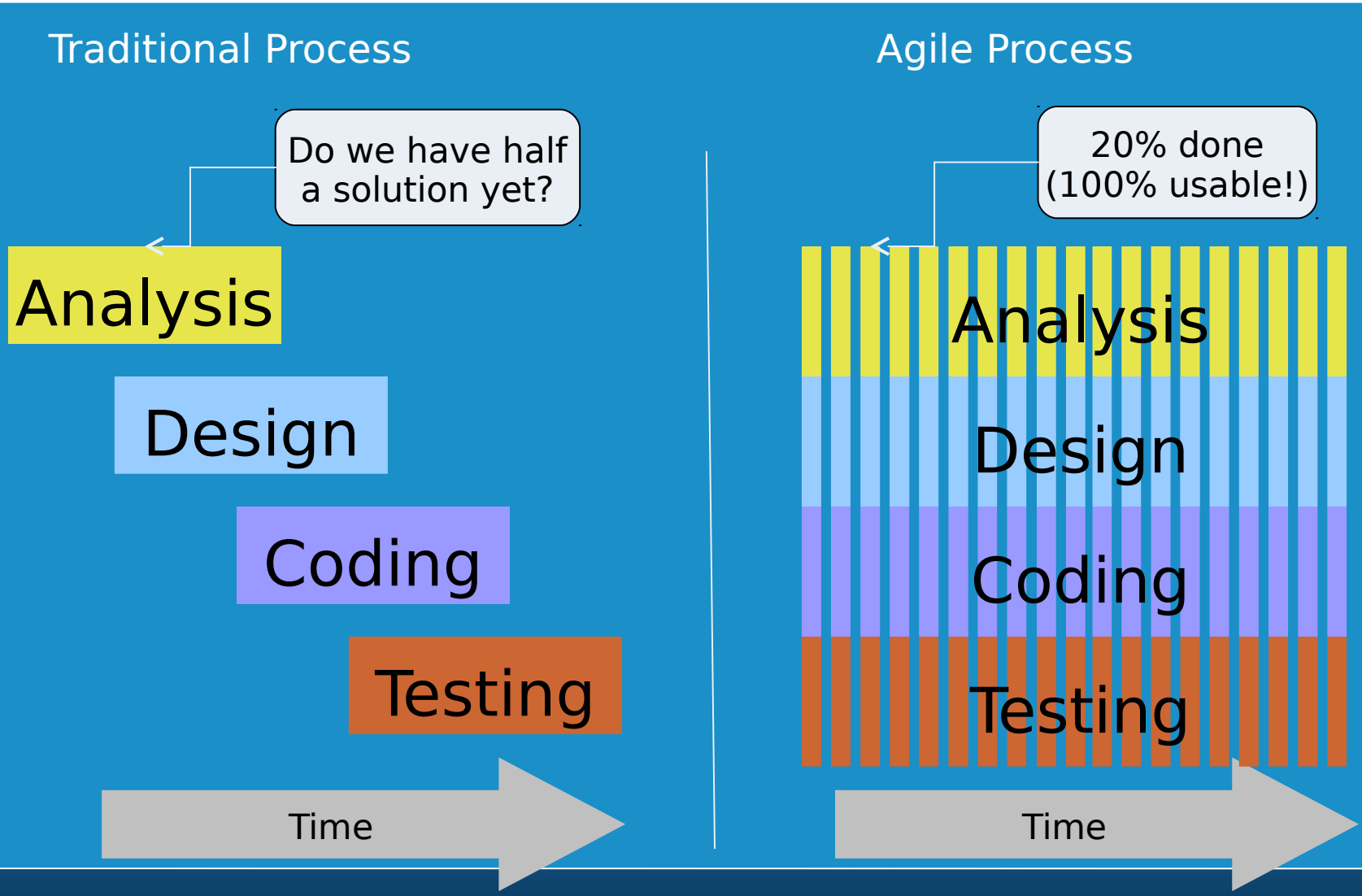
- Application software delivery challenge
  - Ever-increasing complexity
  - Transition introduces change
  - Manual and unmanaged change
  - Change = Risk!
- Result:
  - Loss of service or availability
  - Missed opportunity and increased cost
- Bigger is NOT better!
  - Increased complexity
  - Unmanageable

Delivering Value

Software *generates value when deployed for use and running,*

not *when we write it.*

Agile = Early Value



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Continuous Value

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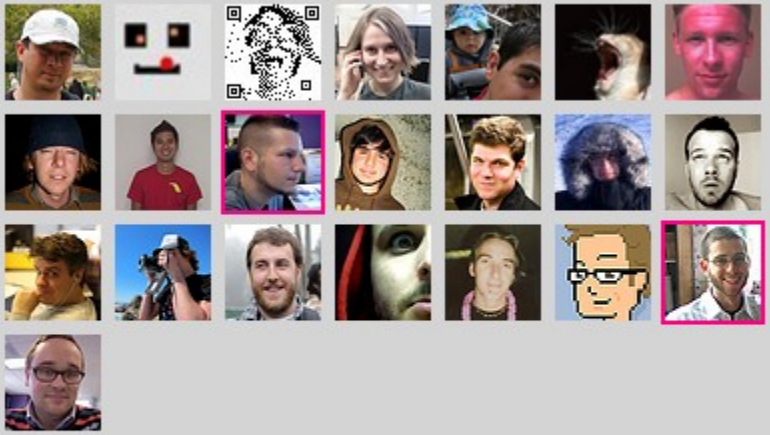
FEATURING



Flickr was last deployed 81 minutes ago, including 11 changes by 2 people.

In the last week there were 92 deploys of 646 changes by 19 people.

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Continuous Delivery

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- Control the application delivery process!
  - All aspects of the application are programmable
  - All software configurations are managed and released as packages
  - Packages can be selected for deployment via self- service portals
  - Deployments can be templated for consistency
  - Deployments can be monitored for immediate feedback and modification

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Forge “Feature Train”

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- “Contract to IOC” within108 days
- Quarterly Major Release Planned (Rel.10)
- Planned releases to ‘Production’
- On-demand releases to ‘Stage’ (early access)
- Daily releases to QA

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Forge Principles

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- Fail fast and often
- Parallel activities permits rapid feedback
- Automation allows for quick deploy and set-up of environments
- Bring the pain forward
- Version everything

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Leverage the Cloud

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- What is the “Cloud”?
  - NIST (on-demand, self-service, measured)
- Cloud drivers
  - Increasing demand for resources by Dev/Test
  - Serial request/approval workflow = bottlenecks
  - Self-service cloud is an enabler
- Cloud Policy
  - DoD CIO
  - Jeffery Zientz (U.S. OMB CPO)
  - Vivek Kendra (U.S. CIO)

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Forge Process

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- Forge Delivery Pipeline (OV-1)
  - Full access to software releases and resources
  - Self-service provisioning of environments
  - Delivery eco-system
    - Software.Forge.mil (ALM)
    - Cloud + automated provisioning + monitoring tools
    - Continuous Integration + automated testing
    - Compliance baselines + configuration management
    - Deployment automation (application classes)

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Continuous Delivery Platform Demo

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DevOps

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- Traditional Ops = 20%+ of project budget
  - Limited visibility into environment…black box!
  - Mostly manual change to configuration
  - Queue service requests, review meetings, etc.
- DevOps in the Cloud
  - Shared configuration and deploy automation code
  - Fully automated (versioned, scripted, repeatable)
  - Full team visibility into the deployed configuration
  - Common goal (deliver value to the customer)
  - ,Shared responsibility and accountability

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Benefits

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- Cost Savings:
  - Cloud commodity (reduced resource costs)
  - Reduced labor costs (automation from bare metal to delivery)
  - Increased efficiency and faster delivery of value to the customer
  - Increased Compliance
  - Increased Security

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Contact Info

Forge.mil

Email us at community@forge.mil

Follow us on Twitter

Join the Forge.mil Group on milBook

Sign up for Forge.mil updates at

http://www.disa.mil/forge/

Next Steps

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- **Get an account**
  - Navigate to https://community.forge.mil (requires a valid DoD CAC or ECA Certificate).
  - Your account is active once your email address is confirmed.
  - For info on how to obtain and install an ECA Certificate, see the FAQ – "How can I get access to Forge.mil" at https://www.forge.mil.
- **Join the Forge Community Support Group to –**
  - Review the Getting Started Guides
  - View Training, FAQs, and Support Documentation
  - Ask Questions and Submit Enhancement Requests
- **Find, connect and follow other members** – browse users under the People tab
- **Find and join a group** – search the Group Directory in Community
- **Find and join a project** – search the Project Directory in Community or 'All Projects' on SoftwareForge or ProjectForge
- **Visit the Forge.mil Community Home**
  - **Visit the featured group and project**
  - **View the most popular content –** What do other users think you should be reading?
- **Still have questions –** contact the Forge.mil Community Management Team at community@forge.mil

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Forge.mil Track Sessions

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Session	Description	Date/Time	Location
Forge 101 – An Introduction to Forge.mil (Daily Sessions)	Learn how to participate in a growing community of developers, program managers, testers, certifiers, end users and Warfighters and how to make the most of the current capabilities	TBD	TBD
		TBD	TBD
		TBD	TBD
Continuous Delivery: Maximize Velocity and Value! (Daily Sessions)	Hear about the key technologies and techniques utilized by the Forge.mil project team to achieve maximum delivery velocity and "satisfy the customer through early and continuous delivery of valuable software"	TBD	TBD
		TBD	TBD
		TBD	TBD
De-mystifying Agile Software Development.		TBD	TBD
Forge.mil Success Stories and Lessons Learned – Community Case Studies	During this track session, attendees can participate in a lively discussion with the Forge.mil leadership and current Forge.mil customers on how Forge.mil is transforming software development.	TBD	TBD
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Forge.mil Breakout Sessions

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Session	Description	Date/Time	Location
Session 1	Agile Software Development – A Day in the Life of an Agile Development Team	TBD	TBD
Session 2	Forge.mil Power Users Information Exchange	TBD	TBD
Session 3	Technical Exchange – Continuous Integration	TBD	TBD
Session 4	Technical Exchange – Subversion Best Practices	TBD	TBD
Session 5	Technical Exchange – Forge.mil Testing Services	TBD	TBD

Next Steps